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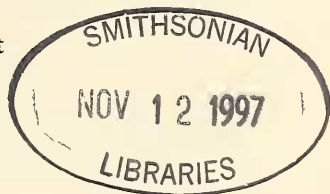
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## A New Genus and four New Species of Palearctic Tachinidae (Diptera)

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With 9 figures



### Summary

A new genus and 4 new species of Palearctic Tachinidae are described: *Chetogena alpestris* n. sp. from the Alps in France and Switzerland, *Laufferiella nigrescens* n. sp. from southern Tunisia, *Pradocania costata* n. gen. n. sp. from western Spain, and *Cylindromyia maroccana* n. sp. from Morocco.

### Zusammenfassung

Eine neue Gattung und 4 neue Arten paläarktischer Tachinidae werden beschrieben: *Chetogena alpestris* n. sp. aus den Französischen und Schweizer Alpen, *Laufferiella nigrescens* n. sp. aus Süd-Tunesien, *Pradocania costata* n. gen. n. sp. aus Westspanien und *Cylindromyia maroccana* n. sp. aus Marokko.

### 1. *Chetogena alpestris* n. sp.

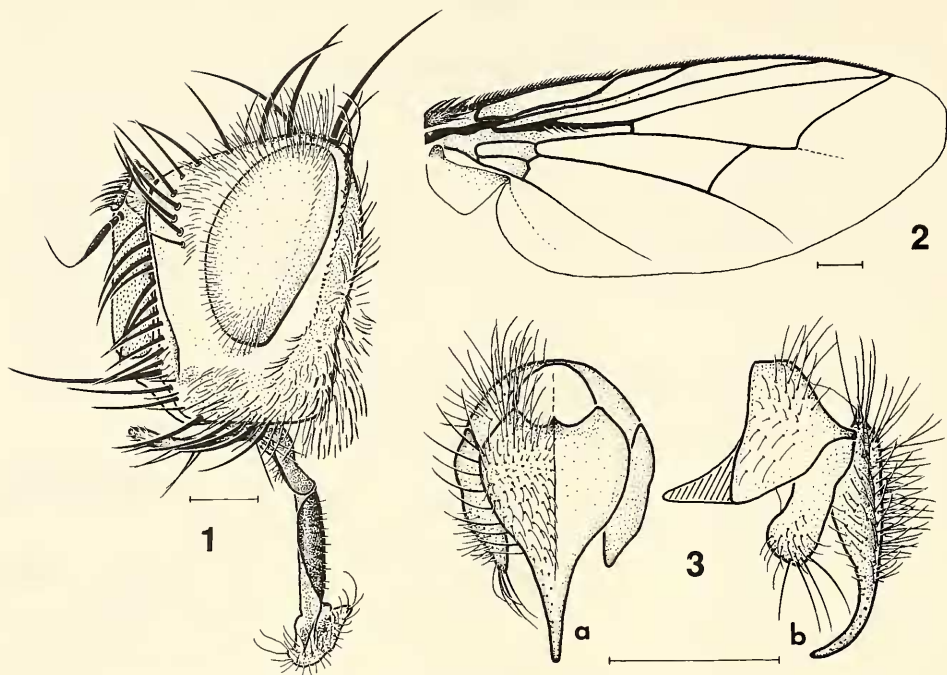
Holotype: ♂, France, Hautes-Alpes, 1 km NW of Brunissard, 1820 m, 11. VII. 1991, on flowers of *Laserpitium* sp. (Daucaceae), leg. H.-P. TSCHORSNIG.

Paratypes: 1 ♂, France, Hautes-Alpes, Montagne de Chaillol (NW Col du Lautaret), 2739 m, 25. VII. 1995, sitting on stones on a hilltop, leg. H.-P. TSCHORSNIG; – 1 ♂, Switzerland, Valais, Visperterminen, Rothorn-Schafalp, 2200–2600 m, 15. VII. 1995, leg. B. MERZ; – 1 ♀, Switzerland, Valais, Visperterminen, Gebidempass/-see, 2000–2200 m, 16. VII. 1995, leg. B. MERZ.

The types have been deposited in the Naturkundemuseum Stuttgart, except for one paratype, which has been deposited in the Institut für Pflanzenwissenschaften of the ETH Zürich (Switzerland).

Male (statements given within square brackets refer to male paratypes):

Colour: Body black. Second antennal segment and facial ridge brownish, palpus yellow, posterior half of scutellum and sides of abdominal tergites 2–4 dark brown. Calypter white. Tegula and basicosta black. Legs black. Head and thorax covered



Figs. 1–3. *Chetogena alpestris* n. sp.; male. – 1. Head; – 2. right wing; – 3. epandrium, syncercus and surstyli, dorsal (a) and lateral (b) view. – Scale: 0.5 mm.

with dense grey pruinescence; scutum before suture with 4 narrow dark longitudinal stripes, the outer stripes indistinct. Abdominal tergites 3–5 with a basal band of dense pruinescence, which covers about the dorsal half and the ventral third of each segment.

Head (Fig. 1): Eye densely covered with long hairs. Frons at its narrowest point 1.03 [1.07–1.15] times as wide as one eye in dorsal view. Outer vertical bristle not differentiated. Postocular setae long, bent forwards. Ocellar bristles strong, proclinate. Frontal bristles descending to level of upper  $\frac{2}{5}$  of parafacial. 2 reclinate upper orbital bristles of equal length. Frons with dense hairs outside frontal row. Parafacial bare, about as wide as third antennal segment. Facial ridge with erect bristles on lower  $\frac{4}{5}$ . Vibrissa arising at level of lower facial margin, the latter erect and slightly visible in lateral view. Third antennal segment 3.5 [3.9] times as long as second antennal segment. Arista bare, thickened on its basal half. Second aristomere 1.5 times as long as wide. Gena, when seen in profile, about  $\frac{2}{5}$  vertical diameter of eye. Occiput with well-developed genal dilation. Posterodorsal half of head without black setulae behind the postocular row. Prementum about 5 times as long as its diameter. Palpus well-developed.

Thorax: Lateral margins of prosternum with several hairs. Proepisternum bare. Postpronotum with 4 bristles. Scutum with 3 + 3 pairs of acrostichal bristles, 3 + 4 pairs of dorsocentral bristles, 1 + 3 intra-alar bristles. Katepisternum with 3 bristles. Katepimeron bare or with 1 fine hair. Scutellum covered with long erect hairs, some of them bristle-like. Apical scutellar bristles strong, crossed, erect.

Wing (Fig. 2): Costal bristle indistinct.  $R_{4+5}$  setose nearly halfway to crossvein r-m. Fourth costal section shorter than sixth costal section. Section of M between crossveins r-m and dm-cu 2.5 [2.4] times as long as section between dm-cu and bend of M. Wing cell  $r_{4+5}$  open.

Legs: Mid tibia with 4 anterodorsal bristles. Hind tibia with 2 dorsal preapical setae.

Abdomen: Syntergite 1 + 2 with 1 pair of median marginal bristles, tergites 3 and 4 each with a row of marginal bristles [tergite 3 with 1 or 2 pairs of median marginal bristles and 2 pairs of lateral marginal bristles], tergite 5 with 2 or 3 rows of bristles on its posterior half. Hairs on abdomen erect. Syncercus broad, slightly concave dorsally (Fig. 3).

Body length: 9.3 [8.7] mm.

Female, differing from male as follows:

Frons at its narrowest point 1.39 times as wide as one eye in dorsal view. Outer vertical bristle present. 2 proclinate orbital bristles. Third antennal segment 3 times as long as second antennal segment.

Having erect hairs on the abdomen, the new species resembles *Chetogena media* Rondani. It can usually easily be separated from *media* by the presence of 4 instead of 3 pairs of postsutural dorsocentral bristles. Specimens of *media* which bear occasionally 4 postsutural dorsocentral bristles can be separated by the key that follows:

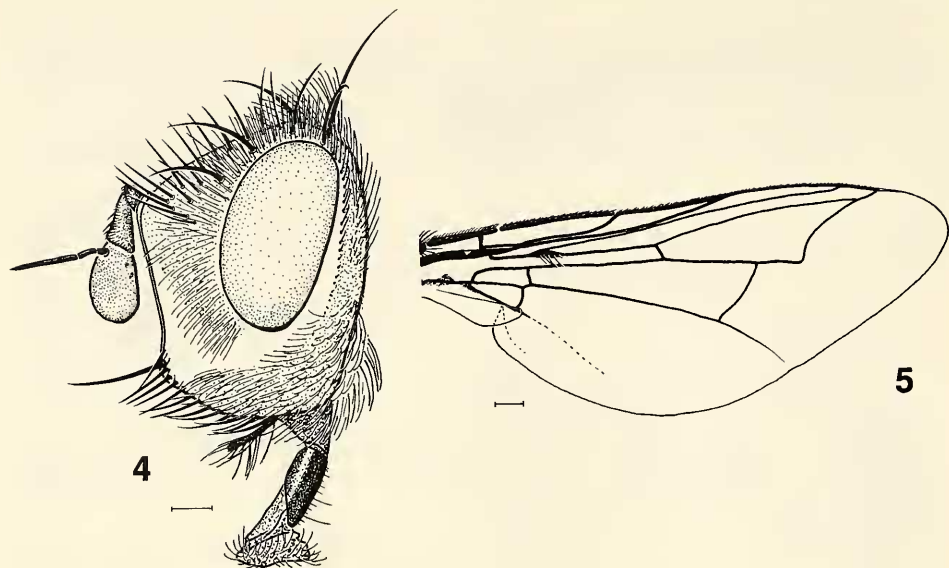
- 1 Basal band of pruinescence on abdominal tergite 4 covering  $2/3$  or more of that segment, showing a posterior prolongation in its dorsal midline (as in subgenus *Ptilotachina* of *Exorista*). Presutural dark longitudinal stripes on scutum distinct. ♂: syncercus narrow, slightly convex dorsally, with a keel-like longitudinal suture. ♀: pruinescent area on abdominal tergite 5 bearing strong hairs and bristles. – Mediterranean distribution . . . . . *media* Rondani
- The basal band of pruinescence covers about the anterior half of abdominal tergite 4, without a prolongation. Outer presutural longitudinal stripes on scutum indistinct. ♂: syncercus broad, slightly concave dorsally, without a keel-like suture (Fig. 3). ♀: pruinescent area on abdominal tergite 5 with hairs only. – Distributed in high altitudes of the Alps (1800–2700 m) . . . . . *alpestris* n. sp.

## 2. *Laufferiella nigrescens* n. sp.

Holotype: ♂, southern Tunisia, oasis Ksar Ghilane, 10. III. 1993, leg. M. HAUSER; deposited in the Naturkundemuseum Stuttgart.

Colour: Body shining black, without pruinescence; head, inner surface of second antennal segment, postalar callus, scutellum, and lateral parts of abdominal tergites 2–4 dark reddish brown. Palpus yellow. Calypter white, its margin yellow. Tegula black, basicosta dark brown. Legs black.

Head (Fig. 4): Eye bare. Frons at its narrowest point 1.85 times as wide as one eye in dorsal view. Outer vertical bristle as long as  $2/3$  of inner vertical bristle. Ocellar bristles proclinate. Frontal bristles descending in a very oblique row to level of lower margin of second antennal segment. Frons outside frontal row with a few additional bristles and dense long hairs. 2 proclinate orbital bristles and 1 latero-clinate prevertical bristle present. Parafacial about twice as wide as third antennal segment, covered with long hairs. Facial ridge with a few setae on lower tenth. Vibrissa arising



Figs. 4–5. *Laufferiella nigrescens* n. sp.; male. – 4. Head; – 5. right wing. – Scale: 0.5 mm.

slightly above level of lower facial margin. Face slightly visible in lateral view. Third antennal segment about 1.5 times as long as second antennal segment. Arista bare, thickened to apex. First aristomere twice as long as wide, second aristomere about 4 times as long as wide. Height of gena, when seen in profile, about half vertical diameter of eye. Occiput with well-developed genal dilation. Back of head with dark brown hairs. Prementum about 2.5 times as long as its diameter. Palpus short, parallel-sided.

Thorax: Prosternum and proepisternum bare. Postpronotum with 5–7 irregularly arranged bristles. Scutum with 3 + 3 pairs of acrostichal bristles, 4 + 4 pairs of dorsocentral bristles. 1 presutural and 3 postsutural intra-alar bristles present. First postsutural supra-alar bristle strong. Katepisternum with 3 bristles. Katepimeron bare. Anepimeron with 3 bristles. Scutellum with 5 pairs of bristles along its margin and 1 pair of recumbent preapical bristles on its posterior dorsal surface; apical bristles strong, crossed, horizontal. Anatergite bare below lower calypter. Posterior lappet of posterior thoracic spiracle large, subcircular.

Wing (Fig. 5): Second costal portion bare ventrally. Costal bristle not differentiated.  $R_1$  and  $CuA_1$  bare.  $R_{4+5}$  with 5 setae on basal fifth. Bend of M obtuse-angled. Fourth costal section less than half as long as sixth costal section. Section of M between crossveins r-m and dm-cu twice as long as section between dm-cu and bend of M. Wing cell  $r_{4+5}$  with a petiole about as long as 0.3 times section of M beyond bend.

Legs: Fore tibia with 2 posterior bristles; preapical anterodorsal seta at least as long as preapical dorsal seta. Mid tibia with 4 anterodorsal bristles, 6 posterodorsal bristles, 2 posterior bristles, 1 ventral bristle. Hind tibia with 9 anterodorsal bristles, 4 posterodorsal bristles, 1 anteroventral bristle, and 2 dorsal preapical setae; preapical posteroventral seta as long as preapical anteroventral seta. Hind coxa with several hairs on posterodorsal margin.



Abdomen: Middorsal depression on syntergite 1 + 2 extending back to hind margin of that segment. Tergite 2 with 2 pairs of lateral marginal bristles; tergite 3 with 1 pair of median marginal bristles and 3 pairs of lateral marginal bristles; tergite 4 with a complete row of median marginal bristles and a few lateral discal bristles; posterior  $\frac{2}{3}$  of tergite 5 covered with several rows of bristles. Hairs on abdomen predominantly recumbent (semi-erect on a midline on tergites 3 and 4 dorsally, erect on tergite 5). Tergite 5 slightly shorter than tergite 4. Sternites 2–4 broadly visible, each with several strong erect bristles.

Body length: 13 mm.

The differences between the new species and the other known species of *Laufferiella* Villeneuve are as follows:

- 1 Hairs on frons and parafacial longer than maximum width of second antennal segment; hairs on scutum twice as long as maximum width of tegula. Subvibrissal and genal bristles at least as long as second antennal segment. Scutum without longitudinal stripes. Abdominal tergite 5 without pruinescence; 3 or 4 rows of discal bristles present; hairs erect. Colour: Head dark reddish brown, hairs on back of head dark brown; postpronotum black; basicosta dark brown; legs entirely black; abdomen predominantly black . . . . . *L. nigrescens* n. sp.
- Hairs on frons and parafacial distinctly shorter than maximum width of second antennal segment; hairs on scutum at most as long as maximum width of tegula. Subvibrissal and genal bristles distinctly shorter than second antennal segment. Scutum with the usual narrow black longitudinal stripes. Abdominal tergite 5 at least with traces of pruinescence near its anterior margin; 1 or 2 rows of discal bristles present; hairs recumbent. Colour: Head yellow, hairs on back of head whitish or yellow; postpronotum red or yellow; basicosta yellow; femora brown or reddish, tibia reddish; abdomen predominantly reddish or yellow . . . . . *L. elegans* Villeneuve and *L. steini* (Zimin).

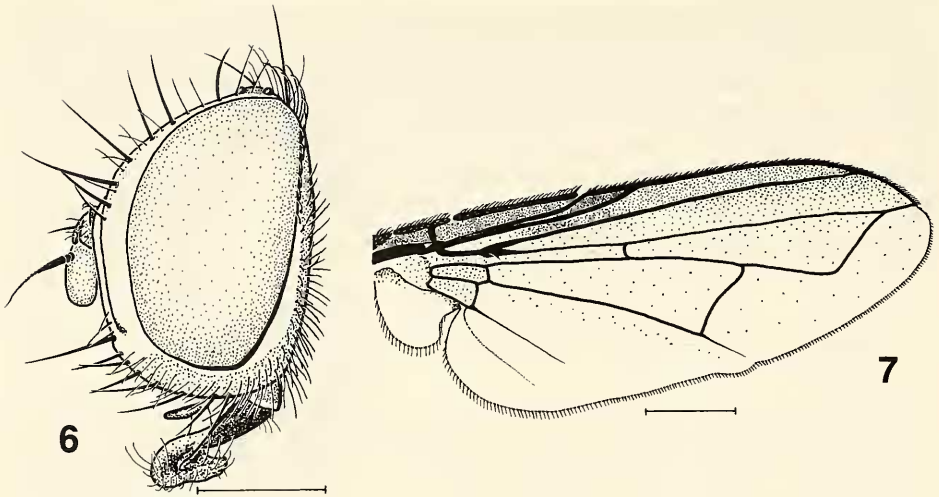
### 3. *Pradocania costata* n. gen. n. sp.

Having a petiolated wing cell  $r_{4+5}$  (Fig. 7), the new genus *Pradocania* resembles *Leucostoma* Meigen and *Clelimyia* Herting. However it does not fit in one of those genera, because of its bare frons outside the frontal row (Fig. 6), the shorter lower calypter, and the anterior margin of wing, which is darkly pigmented (Fig. 7). Furthermore it differs from *Leucostoma* by its proclinate ocellar setae, and from *Clelimyia* by its membranous postmetacoxal area.

Holotype: ♂, Spain, Prov. Salamanca, Aldea del Obispo, Prado Caño, 28. VI. 1995, on flowers of *Elaeoselinum gummiferum* (Desf.) Tutin (Daucaceae), leg. H.-P. TSCHORSNIG; deposited in the Naturkundemuseum Stuttgart.

Colour: Body shining black. Head, sides of thorax, and postpronotum covered with light whitish pruinescence. Antenna dark brown. Palpus yellow. Calypter white. Wing with anterior margin darkly pigmented, tegula and basicosta black. Legs black.

Head (Fig. 6): Eye bare. Frons at its narrowest point 0.29 times as wide as one eye in dorsal view. Inner vertical bristle as long as longest frontal bristle; outer vertical bristle not differentiated. Postocular setae long, bent forwards. Ocellar bristles weak, proclinate. Frontal bristles descending to level of upper third of second antennal segment. 2 weak reclinate upper orbital bristles present. Frons bare outside frontal row. Lunula bare. Parafacial bare, about as wide as third antennal segment. Facial



Figs. 6–7. *Pradocania costata* n. gen. n. sp.; male. – 6. Head; – 7. right wing. – Scale: 0.5 mm.

ridge with 3 setae on lower third. Vibrissa arising at level of lower facial margin. Face not visible in lateral view. Third antennal segment about 2 times as long as second antennal segment. Arista micropubescent, thickened on its basal third. First and second aristomeres short, at most as long as wide. Gena, when seen in profile, about  $\frac{1}{10}$  vertical diameter of eye. Occiput with well-developed genal dilation. Posterodorsal half of head with black setulae behind the postcular row, posteroventral half with numerous pale hairs. Prementum about 3 times as long as its diameter. Palpus well-developed.

Thorax: Prosternum and proepisternum bare. Postpronotum with 2 bristles. Scutum with 1 weak pair of presutural acrostichal bristles, 1 strong pair of postsutural acrostichal bristles, 2 + 3 pairs of dorsocentral bristles. 2 postsutural intra-alar bristles present, separated from each other by about 2 times the distance between the first bristle and the suture. Only 1 postsutural supra-alar bristle present. Katepisternum with 2 bristles. Katepimeron with 1 fine hair on anterior fourth. Anepimeral seta not differentiated from the general anepimeral hairs. Scutellum with basal, subapical and apical bristles, the latter strong, crossed, horizontal. Subscutellum strongly convex. Lower calypter not extending beyond middle of abdominal syntergite 1 + 2. Anatergite bare below lower calypter. Fringes of anterior and posterior lappets of posterior thoracic spiracle short, erect, about equal in size. Postmetacoxal area membranous.

Wing (Fig. 7): Second costal portion bare ventrally. Costal bristle not differentiated.  $R_1$  and  $CuA_1$  bare. Base of  $R_{4+5}$  with a single hair slightly shorter than crossvein r-m. Bend of M obtuse. Fourth costal section longer than sixth costal section. Section of M between crossveins r-m and dm-cu about equal to section between dm-cu and bend of M. Wing cell  $r_{4+5}$  with a petiole about as long as 0.4 times section of M beyond bend.

Legs: Inner anterior surface of fore coxa bare. Fore tibia with 1 posterior bristle; preapical anterodorsal seta about as long as preapical dorsal seta. Mid tibia with 2 an-

terodorsal bristles, 2 posterior bristles, 1 ventral bristle. Hind tibia with 4 anterodorsal bristles, 2 posterodorsal bristles, 2 anteroventral bristles, and 3 strong dorsal preapical setae; preapical posteroventral seta short. Hind coxa bare on posterodorsal margin.

Abdomen: Middorsal depression on syntergite 1 + 2 confined to base of that segment. Tergites 2–5 each with a row of 5 or 6 marginal bristles, without discal bristles. Hairs on abdomen recumbent (except for an occasional erect seta on tergite 3). Tergite 5 as long as  $\frac{2}{3}$  of tergite 4. Sternites not visible, overlapped by ventral edges of tergites. Segments 6–8 broadly visible in posterior view, about as long as epandrium. Syncercus (as far as visible) of the normal *Leucostomatini*-type.

Body length: 3.9 mm.

Female unknown. It may be concluded from the narrowing between male epandrium and syncercus that the abdomen of female must have piercers (as usual in *Leucostomatini*).

#### 4. *Cylindromyia maroccana* n. sp.

Holotype: ♂, Morocco, Haut Atlas, Marrakesch, south of Asni, Quirgane, 22. V. 1995, leg. M. HAUSER

Paratype: ♂, Morocco, Haut Atlas, Marrakesch, Tagadirt, 1000 m, 20. V. 1995, leg. C. KASSEBEER.

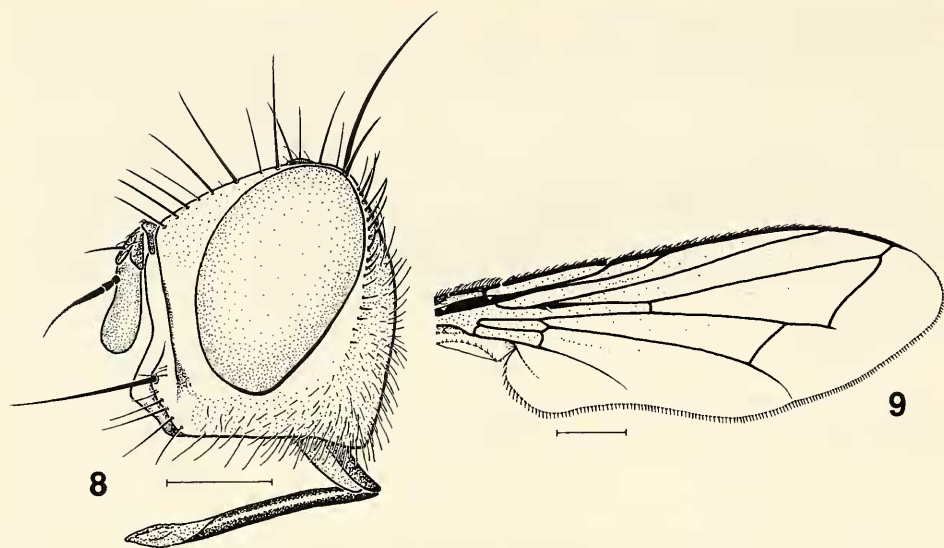
Holotype deposited in the Naturkundemuseum Stuttgart, paratype deposited in the Biosystematics Research Centre, Ottawa (Canada).

Male (statements given within square brackets refer to paratype):

Colour: Body including legs and antenna black. Frontal vitta black. Head and thorax covered with dense whitish pruinescence; scutum before suture with 4 dark longitudinal stripes, the broad outer stripes widely separated from the narrow inner stripes. Calypter white, its inner margin near scutellum yellow. Tegula black, basicoستا reddish yellow. Abdomen reddish yellow, except for the following parts, which are black: segment 1, anterior dorsal  $\frac{2}{5}$  of tergite 2, a median dorsal stripe on tergites 2–4 which is interrupted in the pruinescent area near the sutures, a spot near lateral marginal bristles of tergites 2 and 3 each, posterior  $\frac{2}{5}$  of segment 4, and remaining posterior segments.

Head (Fig. 8): Frons at its narrowest point 0.80 [0.79] times as wide as one eye in dorsal view. Inner vertical bristle as long as  $\frac{3}{4}$  head height, outer vertical bristle as long as  $\frac{1}{3}$  of inner vertical bristle. Frons bare outside frontal row. Parafacial at its narrowest point as wide as 0.6 [0.8] times of third antennal segment. Facial ridge with a few hairs or setulae on lower tenth. Vibrissa as long as face. Third antennal segment 1.9 [2.1] times as long as second antennal segment. Arista thickened on its basal half. Second aristemere 1.0 [2.0] times as long as wide. Gena, when seen in profile, about  $\frac{1}{6}$  vertical diameter of eye. Hairs on genal dilation pale (except a few hairs near anterior margin, which are black). Posterodorsal half of head with 7–10 black setulae on each side behind the postocular row, without a postocular band. Proboscis about as long as head height, prementum 9–10 times as long as its diameter. Palpus absent.

Thorax: Proepisternum bare (holotype with a single fine hair on the left side only). Postpronotum with 3 bristles, the anterior one very weak. Posterior intra-alar



Figs. 8-9. *Cylindromyia maroccana* n. sp.; male. - 8. Head; - 9. right wing. - Scale: 0.5 mm.

bristle absent, posterior supra-alar bristle present. Katepisternum with 2 bristles (holotype with a third weak bristle on the left side only). Basal scutellar bristles strong, subequal in length to subapical bristles; crossed apical bristles about as long as scutellum.

Wing (Fig. 9): Base of  $R_{4+5}$  with 1 or 2 fine hairs. Bend of M blunt-angled, with a short stub [stub absent in paratype]. Section of M between crossveins r-m and dm-cu 3.2 [2.6] times as long as section between dm-cu and bend of M. Petiole of wing cell  $r_{4+5}$  as long as 0.2 [0.3] times section of M beyond bend.

Legs: Mid tibia with 2 anterodorsal and 2 posterodorsal bristles. Hind tibia with 2 [1] posteroventral bristles.

Abdomen: Syntergite 1 + 2 and tergite 3 with 4 marginal bristles and 2 median discal bristles each, tergite 4 with 8 marginal bristles and 2 median discal bristles, tergite 5 with 8-10 marginal bristles. Ventral hairs erect near margins of tergites; lateroventral abdominal hairs strong, only slightly shorter than laterodorsal hairs. Tergite 5 half as long as tergite 4.

Body length: 5.8 [6.2] mm.

Couplet 24 in the key to the Palearctic species of *Cylindromyia* of HERTING (1983) may be replaced as follows:

- 24 Basal scutellar bristles 2-3 times as long as scutellum. Outer vertical bristle present. Abdomen of male with erect hairs ventrally ..... 24 a  
 - Basal scutellar bristles at most as long as scutellum or absent. Outer vertical bristle absent. Abdomen of male with short recumbent hairs ventrally, at most segments 1 or 2 with erect hairs ..... 25  
 24 a Proepisternum setose. Posterior intra-alar bristle present, subequal in length to anterior intra-alar bristle. Mid tibia with 1 anterodorsal and 1 posterodorsal bristle. Posterior margin of abdominal tergite 3 without a dark spot laterally. Hairs on genal dilation (before the prolonged row of postocular setae) black. Prementum 6-8 times as long as its



- diameter. Third antennal segment at least 2.5 times as long as second antennal segment. ♂: lateroventral hairs on abdomen erect, distinctly weaker than laterodorsal hairs. – Body length 10–14 mm ..... *crassa* (Loew)
- Proepisternum bare. Posterior intra-alar bristle absent. Mid tibia with 2 anterodorsal and 2 posterodorsal bristles. Lateral posterior margin of abdominal tergite 3 with a dark spot. Hairs on genal dilation predominantly pale. Prementum 9–10 times as long as its diameter. Third antennal segment at most 2.1 times as long as second antennal segment. ♂: lateroventral abdominal hairs recumbent, nearly as long and strong as laterodorsal hairs. – Body length about 6 mm ..... *maroccana* n. sp.

#### 5. Acknowledgements

The author is grateful to Dr. V. RICHTER (St. Petersburg) for the loan of type material of *Laufferiella* for comparison, to M. HAUSER (Stuttgart) who donated the holotypes of *Laufferiella nigrescens* and *Cylindromyia maroccana*, and to Dr. B. MERZ (Zürich), who donated one paratype of *Chetogena alpestris*.

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